

Claims:

1. An inhaler device (2) comprising first and second components (4, 6) movable relative to one another; means for receiving a medicament cartridge (12) comprising a plurality of compartments (140) containing medicament; medicament extraction facilitating means (14) for locating adjacent a compartment (140) of a received cartridge (12) and thereby allowing an extraction of medicament therefrom; and operating means (16, 28, 34, 40, 42, 44, 46) which, when activated by a user, advances a cartridge compartment (140) of a received cartridge (12) into a predetermined position relative to the medicament extraction facilitating means (14) and extends the medicament extraction facilitating means (14) into a position adjacent said advanced compartment (140) for allowing medicament extraction upon inhalation by a user; wherein the operating means is mounted relative to said first and second components (4, 6) so as to be activated in response to said first and second components (4, 6) being moved relative to one another by a user.
2. An inhaler device (2) as claimed in claim 1, wherein the operating means retracts the medicament extraction facilitating means from adjacent said advanced compartment (140) when further activated by a user, wherein the operating means is mounted relative to said first and second components (4, 6) so as to be further activated in response to said first and second components being moved relative to one another by a user.
3. An inhaler device (2) as claimed in claim 1 or 2, wherein the operating means comprises biasing means (16) for applying a force to a received cartridge (12) which, on activation of the operating means, advances said compartment (140) towards said predetermined position.

4. An inhaler device (2) as claimed in claim 3, wherein the cartridge receiving means and the cartridge biasing means (16) are secured to said first component (4), and wherein the operating means further comprises two pins (34) which are each further secured to said first component (4) so as each to be movable between an extended position, in which the respective pin is engageable with a received cartridge (12) so as to limit the cartridge advancement caused by said biasing force, and a retracted position, in which the respective pin is spaced from a received cartridge (12) so as to not limit cartridge advancement.
5. An inhaler device (2) as claimed in claim 4, wherein the operating means further comprises two camming members (44, 46) secured to said second component (6) which are each arranged so as to move a different one of the two pins (34) in response to said first and second components (4, 6) being moved relative to one another by a user.
6. An inhaler device (2) as claimed in claim 5, wherein said two pin camming members (44, 46) are arranged so as to ensure at least one pin is located in the extended position regardless of the position of said first component relative to said second component.
7. An inhaler device (2) as claimed in claim 6, wherein a space is provided between a medicament cartridge (12) and a pin (34) moved from a retracted position into engagement therewith, the space being such that, when a first pin (34) moves from an extended position into a retracted position, the space between the cartridge (12) and a second pin (34) engaged therewith is closed as the cartridge (12) advances under the bias of the biasing means (16).

8. An inhaler device (2) as claimed in any of the preceding claims, wherein the medicament extraction facilitating means (14) is secured to said first component (4) so as to be movable between an extended position, in which the extraction facilitating means (14) is located adjacent a cartridge compartment (140) for allowing medicament extraction therefrom, and a retracted position, in which the extraction facilitating means (14) is spaced from said cartridge compartment (140) so as to not limit cartridge advancement; and the operating means comprises camming means (40, 42) secured to said second component (6) which is arranged so as to move the extraction facilitating means (14) in response to said first and second components (4, 6) being moved relative to one another by a user.

9. An inhaler device (2) as claimed in claim 8, wherein said camming means (40, 42) comprises two separate camming members (40, 42), a first (40) of which moves the extraction facilitating means (14) towards the extended position and a second (42) of which moves the extraction facilitating means (14) towards the retracted position.

10. An inhaler device (2) as claimed in claim 9, wherein the operating means comprises a lever (28) pivotally secured to said first component (4) and connecting the extraction facilitating means (14) to one of said two separate camming members (40, 42).

11. An inhaler device (2) as claimed in any of the preceding claims, further comprising counting means (148, 150) for indicating to a user the number of compartments (140) remaining to be advanced.

12. An inhaler device (2) as claimed in claim 11, wherein the counting means comprises a member provided with indicia and means for moving said member across a window when a compartment (140) is advanced.

13. An inhaler device (2) as claimed in any of the preceding claims, further comprising a mouthpiece (8) secured to one of said components (4, 6) and in fluid communication with the medicament extraction facilitating means (14), and a mouthpiece cover (10) secured to the other of said components (4, 6).

14. An inhaler device (2) as claimed in any of claims 1 to 12, comprising a mouthpiece (8) and a mouthpiece cover for covering the mouthpiece.

15. An inhaler device (2) as claimed in claim 14, wherein the mouthpiece cover is fixed to the mouthpiece so as to allow relative rotational movement of the mouthpiece and mouthpiece cover between a first configuration, in which the mouthpiece is covered, and a second configuration, in which the mouthpiece is uncovered.

16. An inhaler device (2) as claimed in any of the preceding claims, wherein the extraction facilitating means (14) comprises a fluid passage defining a venturi.

17. An inhaler device (2) as claimed in any of the preceding claims, wherein the extraction facilitating means (14) comprises means for piercing a compartment (140).

18. An inhaler device (2) as claimed in any of the preceding claims, wherein means are provided for preventing advancement of the cartridge (12) once the

medicament extraction facilitating means (14) has been located adjacent each compartment (140) of the cartridge (12).

19. An inhaler device (2) as claimed in any of the preceding claims, wherein a stop member is provided on the cartridge which, when engaged with a stop member provided on one of said first and second components, prevents movement of the cartridge (12) further than the last dose.

20. An inhaler device (2) as hereinafter described with reference to and as shown in the accompanying drawings.